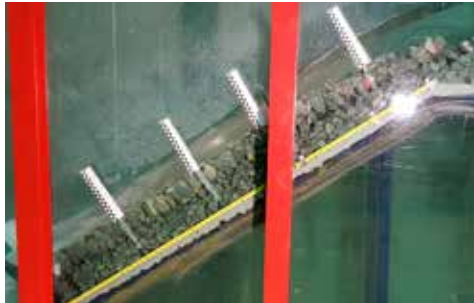


Background

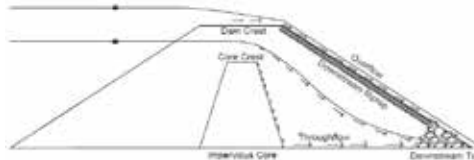
Currently, there are over 185 large rockfill dams (over 15 meter high) in Norway. Many of these dams are poised to be upgraded in the near future to counteract the projected detrimental impacts of climate change on hydrology which can result in devastating floods and accidental overtopping events. Hence, from a dam safety perspective, it is of paramount importance to design efficient overtopping protection systems to protect the dams from these events.



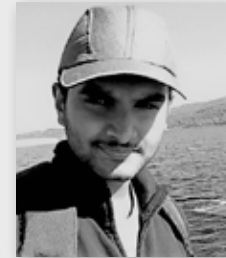
Multitude of past research investigations conducted to study rockfill dam failure under overtopping flows have stated that the probability of initiation of failure at the dam toe is high. Hence, a research project with the working title 'Embankment dam safety under extreme loading conditions' was initiated by HydroCen to address the issue of dam toe instability under overtopping conditions. The primary objective of the project is to come up with a technically effective and economically efficient means of providing adequate stability for rockfill dam toes under overtopping flow conditions.



In order to accomplish the set objectives of the project, physical modeling investigations at the Hydraulics laboratory in NTNU, Trondheim are underway. Also, possibility of large scale field tests are also being considered.



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Embankment dam
safety under extreme
loading conditions

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